MIKHAYLOV, B.M.; POZDNEV, V.F.

Esters of propane-1,3-diboronic and propane-1,3-dithioboronic acids. Izv. AN SSSR.Otd.khim.nauk. no.10:1861-1863 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Boronic acid) (Thiobornic acid)

MIKHAYLOV, B.M.; POZDNEV, V.F.

Methyl ester of di-(3-dimethoxyboryl)propylboronic acid. Izv.AN SSSR. Otd.khim.nauk no.9:1698 S '62. (MIRA 15:10)

1. Institut orgnicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Boronic acid)

POZDNEV, Yu.D.

Clay plasticity and its connection with the properties of molding mixtures. Lit.proizv. no.7:24-26 Jl '62. (MIRA 16:2)

(Sand, Foundry—Additives)

POZDNEYEV, M.L., starshiy nauchnyy sotr.; POPKOV, A.G., mladshiy nauchnyy sotr.; SHPOLYANSKIY, B.Yu.; VERBITSKIY, I.I., starshiy nauchnyy sotr.,otv. za vypusk; MYAKUSHKO, V.P., red.izd-va; SHIBKOVA, R.Ye., tekhn. red.

[Technological processes in the reconditioning (repair) of worn-out parts of the ZIL-157 motortruck] Tekhnologicheskie protsessy vosstanovleniia (remonta) iznoshennykh detalei avtomobilia ZIL-157. Moskva, Goslesbumizdat. Pt.2. [Chassis except engine] Shassi, krome dvigatelia. 1962. 342 p.

1. Khimki. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Rukovoditel' laboratorii tipovoy tekhnologii remonta mashin i organizatsii remontnykh predpriyatiy TSentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Shpolyanskiy).
(Motortrucks--Maintenance and repair)

RESHETNIKOV, N.S., dots.; POZDNEYEV, M.L., starshiy nauchnyy sotr.; POPKOV, A.G., mlad. nauchnyy sotr.; CHERNYSHOV, G.V., mladshiy nauchnyy sotr.; VERBITSKIY, I.I., otv. za vypusk; IOFINOVA, TS.B., red.izd-va; SHIBKOVA, R.Ye., tekhn. red.

[Specifications for checking and sorting parts of MAZ-200 and MAZ-501 motortrucks]Tekhnicheskie usloviia na kontrol' i sortirovku (razbrakovku) detalei avtomobilei MAZ-200 i MAZ-501. Moskva, Goslesbumizdat. Pt.2.[Chassis of the MAZ-200 motortruck (except the engine)] Shassii avtomobilia MAZ-200 (krome dvigatelia). 1962. 214 p. (MIRA 16:3)

1. Khimki. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti.
(Motortrucks--Maintenance and repair)

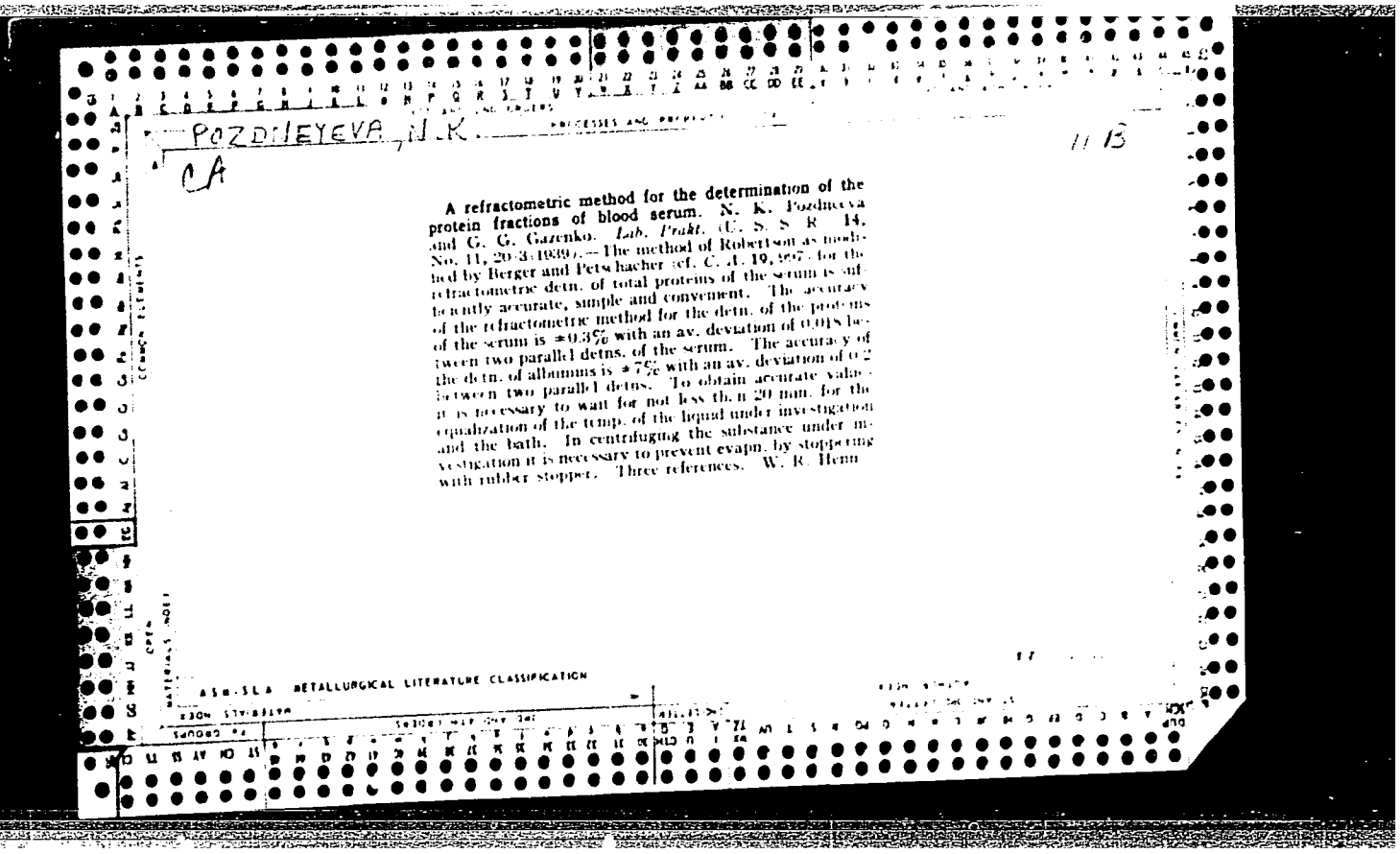
POZDNEYEV, Mark L'vovich; FLEROV, D.I., red.; KIMMEL', L.S., red. izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Using plastic and synthetic materials for repairing timber skidding tractors and logging motor vehicles]Primenenie plasticheskikh mass i sinteticheskikh materialov pri remonte trelevochnykh traktorov i lesovoznykh avtomobilei. Moskva, Goslesbumizdat, 1962. 122 p. (MIRA 16:3)
(Tractors--Maintenance and repair)
(Motor vehicles--Maintenance and repair)

POZDNEYEV, M.M., st. nauchn. sotr.; POPKOV, A.G., inzh.-konstruktor; RESHETNIKOV, N.S., dots.; KLEBANOV, M.Ya., otv. za vypusk; MYAKUSHKO, V.P., red. izd-va; BACHURINA, A.M., tekhn. red.

[Technological processes of the reconditioning of worn-out parts of the MAZ-200 and MAZ-501 motortrucks] Tekhnologicheskie protsessy vosstanovleniia (remonta) iznoshennykh detalei avtomobilei MAZ-200 i MAZ-501. Moskva, Goslesbumizdat, Pt.1.[Parts of the IaAZ-204A engine] Detali dvigatelia IaAZ-204A. 1963. 226 p. (MIRA 16:7)

1. Khimki. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti.
(Motortrucks--Engines)



POZDNEYEVA, N. K.

CA

11 13

A refractometric method for the determination of the protein fractions of blood serum. N. K. Pozdneeva and G. G. Gazenko. *Lab. Prakt.* (U. S. S. R.) 14, No. 11, 20-3 (1939).—The method of Robertson as modified by Berger and Petschacher (cf. C. A. 19, 997) for the refractometric detn. of total proteins of the serum is sufficiently accurate, simple and convenient. The accuracy of the refractometric method for the detn. of the proteins of the serum is ±0.3% with an av. deviation of 0.01% between two parallel detns. of the serum. The accuracy of the detn. of albumins is ±7% with an av. deviation of 0.2 between two parallel detns. To obtain accurate values it is necessary to wait for not less than 20 min. for the equalization of the temp. of the liquid under investigation and the bath. In centrifuging the substance under investigation it is necessary to prevent evapn. by stoppering with rubber stopper. Three references. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ABRIKOSOV, I.A. [deceased]., ZAKHAROVA, Ye.A., KAPLUN, N.A., MARKOVNIKOVA, Y.B., OBROSOV, A.N., POZDNEYEVA, N.K., PUCHKOV, N.V.

Basic problems in galvono-zionization and electrophoresis.
Vop.kur.fizioter. i lech. fiz. kul't. 23 no. 5:390-398 S-O '58
(MIRA 11:11)

1. Iz Nauchno-issledovatel'skogo instituta fizioterapii Ministerstva zdravookhraneniya RSFSR (dir. - chlen-korrespondent AMN SSSR prof. A.N. Obrosov).
(ELECTROPHORESIS)

POZDNIAK, N. A.

B. T. R.
June 1954
Chemistry-Physical

5

(3) Chem

7730* Alkylation of Benzene by Alcohols and Simple Esters in the Gaseous Phase. (Russian.) N. I. Shuikin, K. B. Kuchkarev, and N. A. Pozdniak. *Doklady Akademii Nauk SSSSR*, v. 92, no. 4, Oct. 1, 1953, p. 785-788.

Alkylation of benzene by different aliphatic alcohols and simple esters in contact with $ZnCl_2$ adsorbed by Al_2O_3 at atmosphere pressure. Graphs. 5 ref.

SOLOV'YEV.A.A.; KLIMENKO, Ye.D.; MILOVA, N.A.; POZDNYAKOV, O.M.

Experimental induction of precancer and cancer of the stomach. Bull.eksp.biol. i med. 55 no.1:8 1-85 Ja'63. MIRA (16:7)

1. Iz laboratorii patomorfologii (zav. - chlen-korrespondent AMN SSSR prof. A.A. Solov'yev) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.V.Parin) AMN SSSR, Moskva.
(STOMACH--CANCER)

POZDNIKIN, V.

On TSemes Bay waters. Voen.znan. 31 no.11:22 N '55. (MLRA 9:5)
(Novorossiysk Bay--Aquatic sports--Competitions)

POZDNIKIN, S.

Over the wide icy spaces. Voen.znan.32 no.12:21 D '56. (MLRA 10:2)
(Ice boats)

POZDNIKOV, V.N.; YANUSHKOVSKIY, V.A.; SOLOMINA, L.N., otv. red.; MANVELOVA, Ye.S., tekhn. red.

[Use of radioisotope methods for control in the food industry] Radioizotopnye metody kontrolia v pishchevoi promyshlennosti. Moskva, 1962. 48 p. (MIRA 16:4)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii pishchevoy promyshlennosti.
(Radioisotopes--Industrial applications)
(Automatic control) (Food industry)

POZDNOV, N.

Another provincial interfarm building organization. Sel'.stroi. 14 no.12:17 D '59. (MIRA 13:4)

1. Zamestitel' nachal'nika Voronezhskogo oblastnogo upravleniya sel'skogo khozyaystva.
(Voronezh Province--Construction industry)

POZDNOVA, Ye. N.

Zhidkova, F. T. and Pozdnova, Ye. N. "Investigation of optimum conditions for making a diphtheria bacillus toxin," Collection I, in index, 2nd author: Ye. P. Pozdnova, Sbornik nauch, trudov (Irkut. in-t epidemiologii i mikrobiologii), Issue 4, 1948, p. 163-68

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Stately, No. 3, 1949)

POZDNUKHOV, L.G.; KAVINSKIY, I.T.

Treatment of old dislocation of the capitulum ulnae. Ortop., travm.i protez. no.10:69-71 '61. (MIRA 14:10)

1. Iz kafedry travmatologii i ortopedii (zav. - prof. G.L. Edel'shteyn) Kazakhskogo meditsinskogo instituta (dir. - dots. R.I. Samarin).

(ELBOW--DISLOCATION)

POZDNUKHOV, L.G.

Anesthesia in surgery of the thoracic cavity. Trudy Inst.klin.i eksp.khir. AN Kazakh.SSR 5:30-34 '59. (MIRA 13:5)
(ANESTHESIA) (CHEST--SURGERY)

POZDNUKHOV, N.G. (Alma-Ata)

Experience in the expansion of the communist labor movement. Shvein. prom. no.1:4-6 Ja-F '63. (MIRA 16:4)

(Clothing industry)
(Socialist competition)

POZDNUKHOVA, M.

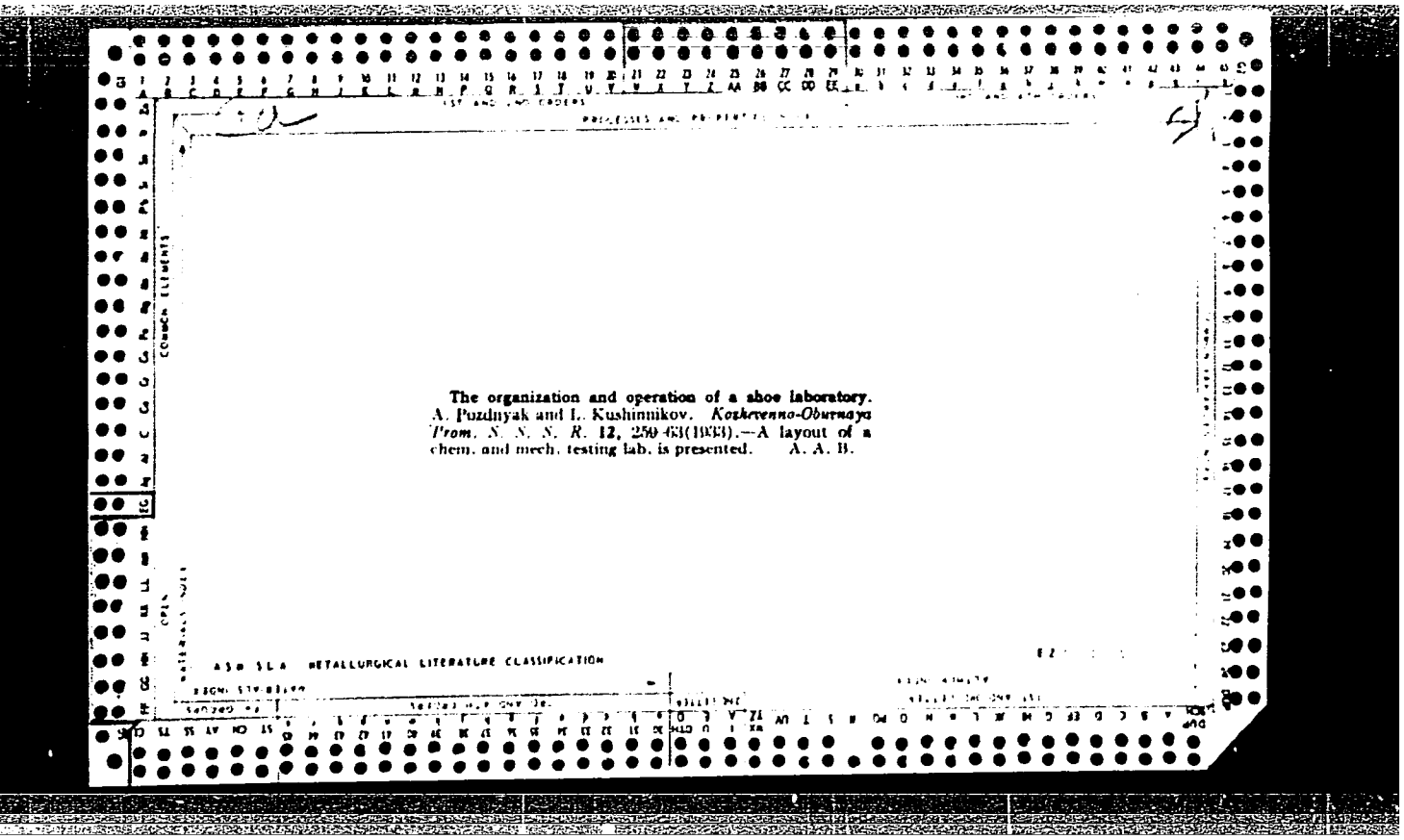
Feeding and Feeding Stuffs

Pumpkins and squashes for cattle feed. Kolkh. proizv., 12, No. ., 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952 ////1953, Uncl.

POZDNUKHOVA, V.I.; KUPTSOVA, Z.V., red.;SAYTANIDI, L.D., tekhn. red.

[Safety measures in the transportation, storage, and use of toxic chemicals] Tekhnika bezopasnosti pri transportirovke, khranenii i ispol'zovanii iadokhimikatov. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961. 14 p. (MIRA 15:3)
(Chemicals--Safety measures)



The organization and operation of a shoe laboratory. A. Pozdnyak and L. Kushinnikov. *Kozhevenno-Obuvnaya Prom. S. S. S. R.* **12**, 259-63(1933).—A layout of a chem. and mech. testing lab. is presented. A. A. B.

LARIONOV, S.F., inzh.; POZDNYAK, A.A., inzh.

Concerning I.I.Khazovskii's article "Change-over to centralized structure of the departments in electric power plants." Elek. sta. 33 no.7:90-91 Jl '62. (MIRA 15:8)
(Electric power plants) (Khazovskii, I.I.)

ANOSOV, D.V., kand. fiziko-matematicheskikh nauk; POZDNYAK, E.G., kand. fiziko-matematicheskikh nauk

New achievements of Soviet mathematicians. Mat. v shkole no.3: 3-9 My-Je '63. (MIRA 16:7)

1. Matematicheskiy institut imeni Steklova AN SSSR, Moskva (for Anosov). 2. Moskovskiy gosudarstvennyy universitet imeni Lomonosova (for Pozdnyak).
(Mathematicians, Russian)

POZDNYAK, F.

Efficiency promoters and their efforts to increase the productivity of labor. Moloch. prom. 18 no.6:33 '57. (MLRA 10:6)

1. Bryukhovetskiy molochnokonservnyy zavod.
(Dairy industry)

POZDNYAK, F.

23399. Vyrabotka kazeina vysshego sorta. Moloch. Prom-st', 1949, No. 7, c. 15-16.

SO: LETOPIS NO. 31, 1949.

POZDNYAK, F.K., inzh.

Introduce advanced practices into production. Masl.-zhir.prom. 29 no.9:42-43 S '63. (MIRA 16:10)

1. Ussuriyskiy maslozhirovoy kombinat.

POZDNYAK, F.K., inzh.

From practices of the manufacture of phosphatides. Masl.-zhir.prom. 29 no.7:41 Jl '63. (MIRA 16:9)

1. Ussuriyskiy maslozhirovoy kombinat.
(Phosphatides)

FROLOV, Vladimir Tikhonovich; POZDNYAK, I.I., red.

[Manual for laboratory studies on the petrography of sedimentary rocks] Rukovodstvo k laboratornym zaniatiiam po petrografii osadochnykh porod. Moskva, Izd-vo Mosk. univ., 1964. 309 p. (MIRA 18:1)

FROLOV, Vladimir Tikhonovich; POZDNYAK, I.I., red.

[Practice and methods of complex stratolithologic and paleographic studies; as revealed by a study made of the sediments of Daghestan] Opyt i metodika kompleksnykh stratigrafo-litologicheskikh i paleogeograficheskikh issledovanii; na primere iurskikh otlozhenii Dagestana. Moskva, Mosk. univ., 1965. 179 p. (MIRA 18:12)

MINSKIY, Ye.M.; POZDNYAK, M.V.

Approximate methods for solving problems of nonstationary gas flow to wells draining a bounded bed. Trudy VNIIGAZ no.18/26:5-24 '63. (MIRA 18:3)

[redacted], M. I. and Brykin, M.A.

On the Mechanism of Vapor-Phase Alkylation of Benzene with Acetals in the Presence of an Aluminum Silicate Catalyst, page 1007.
Sbornik statey po obshchey khi ii (Collection of Papers on General Chemistry), Vol II, Moscow-Leningrad, 1953, pages 1081-1086.

Laboratory of the Chemistry of Petroleum imeni N. D. Zelinskiy, Moscow State U

ROZENTSVET, M. A. and Shuykin, N. I.

Contact-Catalysis Alkylation of Benzene with Acetals. II. Ethylation of Benzene with Ethylal (Diethylformal) Dyethyl Acetal and Diethyl Ether, page 1014.
Sbornik statey po obshchey Khimii (Collection of Papers on General Chemistry,, Vol II, Moscow-Leningrad, 1953, pages 1680-1686.

Laboratory of the Chemistry of Petroleum imeni N. D. Zelinskiy, Moscow State U

POZDNYAK, N.A.

CZECH

Mechanism of vapor-phase alkylation of benzene with acetals in the presence of aluminosilicate catalyst. N. I. Shuikin and N. A. Pozdnyak (Moscow State Univ.). *Sbornik Statei Obshchei Khim.* 2, 1008-13(1953).—Passage of CH_2O, dry or in 32% aq. soln., over aluminosilicate catalyst at 185-230° in N gave 10-40% HCO_2Me, b_{744} 32.5°, n_D^{20} 1.3421; the best yield was obtained at 200° with 32% aq. CH_2O at space velocity 0.15. Small amts. of MeOH, HCO_2H, and unchanged CH_2O are recovered. At 350-500° the main products are gases and H_2O. Passage of C_6H_6 with CH_2O at 500° over the catalyst gave a range of products, b. 79-140° and higher, contg. small amts. of MePh. HCO_2H failed to yield any MePh. Passage of C_6H_6 and HCO_2Me over the catalyst at 500° gave the best yield (14.3%) of MePh with a 1:1 proportion of the reactants. The alkylation is believed to be a radical reaction, with esters or ethers as the active agents; acetals used as alkylating agents appear to react through the intermediacy of ethers resulting from their pyrolysis. G. M. Kosolapoff

POZDNYAK, N.A.

Vapor phase alkylation of benzene by alcohols and ethers. N. I. Shuikin, A. B. Kuchkarev, and N. A. Pozdnyak (Inst. Org. Chem., Acad. Sci. U.S.S.R., [illegible]). *Doklady Akad. Nauk S.S.S.R.* 92, 785–8(1953).—Alkylation of C_6H_6 with iso-PrOH over $ZnCl_2$ on Al_2O_3 at atm. pressure at 175–200° with a 4:1 reactant ratio gave 50% crude iso-PrPh at a space velocity of 0.15–0.2 l./hr. At higher rates the yield declines; increase of the C_6H_6 proportion to 86 mole-% raises the yield to 54%. Some 12–15% dialkylate also forms. Alkylation with PrOH requires 250°, when 45% alkylbenzene is formed, the product also being iso-PrPh. The 4:1 ratio of reactants with BuOH at 250° gave 38% crude BuPh, from which was isolated some 35% sec-BuPh. Alkylation with MeOH or EtOH requires 300°, when 10% MePh or 16% EtPh is obtained. iso-Pr_2O at 250° with a 4:1 reactant ratio gave 48% iso-PrPh and 20% dialkylation product. Bu_2O i. less reactive and at 250–300° gave 30% crude BuPh with a 6:1 reactant ratio; at 160° the yield was 14% only at a space velocity of about 0.15; rates higher than this (0.6) led to complete cessation of alkylation. Et_2O at 300° with a 2:1 reactant ratio gave but 5.4% EtPh. The results indicate that the alkylation proceeds through formation of unsatd. intermediates. G. M. K.

SHUYKIN, N.I.; POZDNYAK, N.A.; DOBRYNINA, T.P.

Catalytic alkylation of tetraline. Report No.10: Possibility of using the dehydrogenation catalysts of n-nonane for the alkylation of tetraline. Izv. AN SSSR. Ser.khim. no.3:530-534 Mr '64. (MIRA 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SHUYKIN, N.I.; POZDNYAK, N.A.; LUBUZH, Ye.D.

Catalytic alkylation of tetralin. Report 5: Alkylation of tetralin with primary alcohols of composition C_7 and higher. Izv.AN SSSR, Otd.khim.nauk no.6:1098-1102 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Naphthalene) (Alkylation)

SHUYKIN, N.I.; POZDNYAK, N.A.

Catalytic alkylation of tetralin by 1-nonene in the presence of aluminum. Izv.AN SSSR.Otd.khim.nauk no.6:1156-1158 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Naphthalene) (Nonene) (Alkylation)

Rossiiskii, A. A.

Dissertation: "An Investigation of the Reaction of Catalytic Alkylation of Benzene in the Vapor Phase." Cand Chem Sci, Institute of Organic Chemistry imeni N. D. Zelinskiy, Acad Sci USSR, 25 Jun 54. (Vechernyaya Moskva, Moscow, 16 Jun 54)

SO: Sum 318, 23 Dec 1954

Pozdnyak, N.A.

6

Catalytic-catalytic alkylation of benzene in the presence of zinc chloride, deposited on aluminium oxide, under conditions of elevated pressure. N. I. Shuikin, A. B. Kuch-

B. M. K.

(2)

Pozdnyak, N. A.

62

✓Contact-catalytic alkylation of benzene in the presence of zinc chloride, deposited on aluminum oxide, under conditions of elevated pressure. N. I. Shulkin, A. B. Kuchkarev, and N. A. Pozdnyak (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 904–10.—Alkylation of C_6H_6 by means of Et_2O, EtOH, or iso-PrOH in vapor phase at elevated pressure was achieved by contact with $ZnCl_2$ deposited on Al_2O_3. With Et_2O a 41–3.5% yield of crude EtPh is obtained (calcd. on Et_2O) at 20 atm. and in the range of 250–400°. At 300° an increase of pressure from 20 atm. to 60 atm. results in a moderate increase of alkylate. At 300–50° and 20 atm. with a C_6H_6/Et_2O ratio of 4.5–1 to 6–1 there is obtained a crude cut of EtPh amounting to 74–80% yield based on Et_2O or 13–14% based on C_6H_6. Alkylation with C_2H_4 gives 16% yield (based on C_6H_6) at 300°, 40 atm. and 2:1 reagent ratio; the catalyzate contains, besides EtPh, some MePh and $C_6H_4Et_2$ (15.4% *o*, 46.2 *m*, and 38.1% *p*). iso-PrOH is most effective at 300–50° and at 20–40 atm. yields iso-PrPh in 66.3% yield (based on the alc.). G. M. Kosolapoff

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L 34906-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL RM/WW
ACCESSION NR: AP5008110 S/0062/65/000/002/0353/0355

AUTHOR: Shuykin, N. I.; Pozdnyak, N. A.

TITLE: Catalytic synthesis of allylaromatic hydrocarbons

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1965, 353-355

TOPIC TAGS: alkylation, alkenylaromatic hydrocarbon, allylbenzene, allyltoluene, allyltetralin

ABSTRACT: As allylbenzene, allyltoluene, and allyltetralin are potential starting materials for the synthesis of new types of rubber and other polymers, their synthesis is of considerable interest. In this work, benzene, toluene and tetralin were alkylated with allyl alcohol in the presence of zinc chloride. The choice of the appropriate solvent or, in some cases, the use of the reacting hydrocarbon as solvent was dictated mainly by the need to keep the reaction temperature above 110C, since below that temperature no alkenylation takes place. Conventional Friedel-Crafts techniques were used. The best yields obtained were 50.0, 72.9, 60.0% (based on allyl alcohol) for allylbenzene,

Card 1/2

L 34906-65 4

ACCESSION NR: AP5008110

allyltoluene, and allyltetralin, respectively. Allyltetralin and allyltoluene copolymerize easily with butadiene to form elastomers. 15 [VS]
Orig. art. has: 1 equation, and 2 tables.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 04Jun64 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 003 OTHER: 003 ATD PRESS: 3212

Card 2/2

SHUYKIN, N.I.; POZDNYAK, N.A.; DOBRYNINA, T.P.

Action of cation-exchange resin KU-2 on the primary alcohols of normal structure. Izv.AN SSSR.Ser.khim. no.9:1705-1707 S '64. (MIRA 17:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SHUYKIN, N.I.; POLUNYAK, N.A.; [illegible]

Catalytic alkylation of tetralin. Report 11: Alkylation of tetralin in the presence of titanium tetrachloride. Izv. AN SSSR Ser. khim. no.1:119-123 '65. (MIRA 18:2)

1. Institut organicheskoy khimii im. N.I. Zelinskogo AN SSSR.

SHUYKIN, N.I.; POZDNYAK, N.A.

Catalytic synthesis of allylaromatic hydrocarbons. Izv. AN SSSR Ser. khim. no.2:353-355 '65. (MIRA 18:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SHUYKIN, N.I.; POZDNYAK, N.A.; DOBRYNINA, T.P.

Catalytic alkylation of tetralin. Report No.9: Alkylation of tetralin by alkene fractions of paraffin cracking. Izv. AN SSSR. Ser. khim. no.11:2011-2014 N '63. (MIRA 17:1)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.

SHUYKIN, N.I.; POZDNYAK, N.A.

Catalytic alkylation of tetralin. Report No.8: Alkylation of tetralin by alkenes in the presence of aluminum. Izv.AN SSSR.Otd.khim.nauk no.8:1455-1457 Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Naphthalene) (Olefins) (Alkylation)

SHUYKIN, N.I.; POZDNYAK, N.A.; LIFANOVA, I.N.

Catalytic alkylation of tetralin. Report No.7: Alkylation of tetralin by alkyl halides in the presence of metallic aluminum. Izv.AN SSSR Otd.khim.nauk no.4:695-697 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nephthalene) (Alkyl halides)

SHUYKIN, N.I.; LEBEDEV, B.L.; POZDNYAK, N.A.; LUBUZH, Ye.D.

Catalytic alkylation of tetralin in the presence of metallic aluminum.
Neftekhimiia 1 no.1:39-45 Ja-F '61. (MIRA 15:2)

1. Institut organicheskoy khimii AN SSSR imeni Zelinskogo.
(Naphthalene) (Alkylation)

36639

S/062/62/000/004/009/013
B110/B101

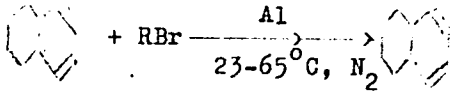
11.0132

AUTHORS: Shuykin, N. I., Pozdnyak, N. A., and Lifanova, I. N.

TITLE: Catalytic alkylation of tetralin. Communication 7. Alkylation of tetralin with alkyl halides in the presence of metallic aluminum

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 4, 1962, 695-697

TEXT: Tetralin was alkylated with propyl, butyl, nonyl, and decyl bromides in an N_2 atmosphere, in the presence of Al:



The yields at 65°C were 75.6, 92.5, 98.8, 77.3, and 53.5%, respectively. In air, no alkylation took place with butyl and heptyl bromides even after 6 hrs' stirring; only at 105°C, butyl tetralin formed in 34% yield. Partial isomerization of the primary alkyl radicals occurred at 65°C; alkyl tetralins

Card 1/3

Catalytic alkylation of ...

with an alkyl group of normal structure were formed at 23°C by alkylation with n-propyl and n-butyl bromides. Optimum conditions: 5 hrs' heating at 65°C in nonane medium and N_2 atmosphere. Under these conditions, the reaction occurred after stirring for 10 - 40 min. At 65°C, n-heptyl bromide reacts almost completely with tetralin. The yields depended on the chain length of the alkyl bromide: At 23°C, the reaction with n-propyl bromide in nonane solution started 10 min after mixing, with butyl bromide after 20 min, but with heptyl bromide it did not even after 4 hrs. Without a solvent, n-propyl and n-butyl bromide reacted immediately, heptyl bromide after 2 hrs, nonyl bromide after 4.5 hrs, and decyl bromide after 7 hrs. At 23°C, the reaction with n-propyl and n-butyl bromides was completed after 5 hrs, and with n-heptyl, n-nonyl, and n-decyl bromides after 125 hrs; this has been ascertained from the separation of hydrogen bromide. The yields of propyl, butyl, and heptyl tetralins were always higher than those of nonyl and decyl tetralins. The infrared spectra showed that normal and isomeric 6-mono- and 6,7-dialkyl tetralins were formed at 65 and 105°C, but only 6-alkyl tetralins with a normal alkyl

Card 2/3

Catalytic alkylation of ...

group at 23°C with n-propyl and n-butyl bromides. There are 1 figure and 2 tables.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: October 28, 1961

Card 3/3

33982
S/062/62/000/002/007/013
B117/B138

5.3300

AUTHORS: Shuykin, N. I., and Pozdnyak, N. A.

TITLE: Catalytic alkylation of tetralin. 6. Alkylation of tetralin by secondary alcohols

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no 2. 1962, 324-327

TEXT: The alkylation of tetralin by primary alcohols with 6-isoalkyl tetralins as the product had been described in previous papers (Ref. 1: Izv. AN SSSR. Otd. khim. n. 1961, 326; Ref. 2: Izv. AN SSSR. Otd. khim. n. 1961, 1098). The same result was now achieved using secondary alcohols. The following secondary alcohols were synthesized by Grignard's reaction: nonanol-2, $C_9H_{20}O$, boiling point 194-195°C (747 mm Hg), yield 65.5 %; nonanol-3, $C_9H_{20}O$, boiling point 96-98°C (8 mm Hg), yield 67.3 %; undecanol-5, $C_{11}H_{24}O$, boiling point 139-140°C (17 mm Hg), yield 40.5 %; tetradecanol-7 (for the first time) $C_{14}H_{30}O$, boiling point 138-140°C (6 mm Hg) (after recrystallization from hexane: melting point 42.0°C,

Card 1/3

solidification point 41.6°C), yield 51.5 %. The tetralin alkylation, in a 1:1 ratio to alcohol, took place in the presence of zinc chloride at atmospheric pressure and lasted 5 hr. 155°C was found to be the optimum temperature in alkylation with nonanols. Experiments with other alcohols were conducted at the temperatures at which the reaction began. Secondary alcohols react with tetralin at lower temperatures than primary alcohols. Alkylation with the above mentioned alcohols yielded 6-isoalkyl tetralins in a 75 % yield from the reacting tetralin. Yields as referred to alcohol: 49.5 % of nonanol-2; 45.0 % of nonanol-3; 33.6 % of undecanol-5, and 17.6 % of tetradecanol-7. The following alkyl tetralins were synthesized: Nonyl tetralin, boiling point 168-175°C (6 mm Hg), n_D^{20} 1.5130, MR 84.33 (84.14); undecyl tetralin, boiling point 212-214°C (6 mm Hg), n_D^{20} 1.5113, MR 95.06 (94.38); tetradecyl tetralin, boiling point 223-224°C (6 mm Hg), MR 107.21 (103.23). Their structure was determined from the IR-spectra taken on an ИКС-12 (IKS-12) instrument. Here also as in previous experiments, the following were separated besides alkyl tetralins: nonconverted tetralin, alkenes corresponding to the used alcohols, and nonconverted alcohol in experiments with undecanol and tetradecanol.

33982

S/062/62/000/002/007/013
B117/B138

Catalytic alkylation of...

I. N. Lifanova is thanked for the IR-spectra. There are 4 tables and 5 references: 3 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: R. H. Pickard, I. Kenyon, J. Amer Chem Soc. 99, 55 (1911).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 30, 1961

Card 3/3

SHUYKIN, N.I.; SHLYAPOCHNIKOV, V.A.; POZDNYAK, N.A.; LEBEDEV, B.L.

Catalytic alkylation of tetralin. Report No.4: Determination of the structure of alkyltetralins by infrared spectroscopy. Izv.AN SSSR Otd.khim.nauk no.3:466-468 Mr '61. (MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Naphthalene---Spectra)

SHUYKIN, N.I.; POZDNYAK, N.A.

Catalytic alkylation of tetralin. Report No.3: Alkylation of tetralin by 1-nonene and n-nonyl alcohol. Izv. AN SSSR. Otd. khim. nauk no.2:326-329 F '61. (MIRA 14:2)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Napthalene) (Nonene) (Nonyl alcohol)

SHUDYKIN, N.I.; POZDNYAK, N.A.

Catalytic methylation of benzene by methanol. Zhur. prikl. khim. 33 no.8:1904-1906 Ag '60. (MIRA 13:9)
(Benzene) (Methanol) (Methylation)

SHUYKIN, N.I.; POZDNYAK, N.A.

Catalytic alkylation of tetralin. Report No.1: Alkylation of tetralin with amylenes. *Izv.AN SSSR.Otd.khim.nauk no.6:* 1094-1097 Jl '60. (MIRA 13:7)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.

(Naphthalene) (Pentene) (Alkylation)

S/080/60/033/008/012/013
A003/A001

AUTHORS: Shuykin, N.I., Pozdnyak, N.A.

TITLE: The Catalytic Methylation of Benzene by Methanol

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 8, pp. 1904-1906

TEXT: The article is a continuation of the work published in Ref. 3. A special apparatus was designed for the continuous methylation of benzene by methanol and also for the methylation under a pressure of 20-60 atm. This apparatus makes it possible to obtain catalyzates containing 92-95% alkylate with at least 60% toluene. The apparatus comprises an electric furnace with the alumosilicate catalyst, in which the reaction takes place at 450 and 500°C. The ratio of benzene:methanol is 4:1. The alkylate obtained at 500°C consists of 60.5% toluene, 20.3% xylenes and 19.2% polymethylbenzenes. The methylation under pressure was investigated at 400, 450 and 475°C and pressures from 20 to 60 atm. An increase in pressure as well as in temperature promotes the formation of methylbenzenes, among them also xylenes. The yield of the toluene fraction increases very slowly in the pressure range from 20 to 40 atm and decreases with a further pressure increase. The effect of an excess of methyl alcohol in the reaction mix-

Card 1/2

The Catalytic Methylation of Benzene by Methanol

ture is similar to the effect of the pressure. The optimum conditions for alkylation under pressure are the following: temperature 475°C, pressure 20 atm, molar ratio of benzene to methanol 1:2. The yield of alkylate is 42.3%, containing 19.9% toluene and 11.5% xylene. The xylenes obtained consisted of 21.3% o-isomer, 27.1% n-isomer and 51.6% m-isomer. There are 4 figures and 4 references: 2 Soviet, 1 English and 1 American.

SUBMITTED: January 15, 1960

Card 2/2

Izvestiya AN, Otd. Khim.

5.3200

82102
S/062/60/000/07/06/007
B015/B054

AUTHORS: Shuykin, N. I., Pozdnyak, N. A., Shlyapochnikov, V. A.

TITLE: Catalytic Alkylation of Tetralin. Information 2. Alkylation of Tetralin With Heptene-1

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 7, pp. 1254-1257

TEXT: The authors alkylated Tetralin with heptene-1 in a continuous-flow apparatus using two types of catalysts. In one series of experiments they used an aluminum oxide treated with hydrofluoric acid (10% and 20% HF), in the other series an aluminosilicate catalyst; the experiments were carried out at atmospheric and increased pressure and at different temperatures (Tables 1-3, influence of different test conditions). In the catalytic alkylation, a mixture of β-heptyl Tetralin and β,β'-diheptyl Tetralin was obtained. The given data show that with the aluminosilicate catalyst the following optimum conditions exist: volume velocity 0.25 hours^{-1}, temperature 200°C, pressure 10 atm, molar ratio Tetralin : heptene-1 = = 2 : 1. Under these conditions, the yield in β-heptyl Tetralin is 48.7%

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Catalytic Alkylation of Tetralin. Information 2. Alkylation of Tetralin With Heptene-1

82102
S/062/60/000/07/06/007
B015/B054

with respect to heptene-1, and 24.3% with respect to Tetralin. The infrared spectra of the heptyl Tetralin synthesized showed that the heptyl group lies in the β-position. B. A. Kazanskiy, G. A. Tarasova, and O. D. Sterligov are mentioned in the paper. There are 3 tables and 6 references: 3 Soviet and 3 American.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: December 10, 195

Card 2/2

S/020/60/131/02/035/071
B011/B005

AUTHORS: Shuykin, N. I., Corresponding Member AS USSR, Lebedev, B. L., Pozdnyak, N. A.

TITLE: Synthesis of 6-Alkyltetralines

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 2, pp 335-337 (USSR)

ABSTRACT: The authors synthesized 6-alkyltetralines. This was necessary for the synthesis of some standard 6-alkyltetralines required for the analysis of catalyzates by means of IR spectroscopy. As pure 6-alkyltetralines could practically not be produced by other methods, the authors followed reference 4. A mixture of 2-alkyl- and 6-alkyltetralines at a ratio of 1:2 develops by hydrogenation of 2-alkylnaphthalenes. The enclosed diagram shows the method of synthesis used by the authors. Tetraline was acylated in nitro-benzene medium according to Friedel-Crafts since in this medium the substitution occurs in the β-position only (Ref 5). By reaction of the tetraline with acid chlorides of corresponding acids in the presence of $AlCl_3$ at 0°, the authors obtained the following com-pounds: 1,2,3,4-tetrahydro-6-naphthylbutyl-, n-amyl-, n-heptyl-, and n-nonylketone (Table 1). Tertiary alcohols were synthesized by Grignard's method. 8-(6-tetralyl)-nonanol-8 with the boiling point 180.5-182.5 (3mm) was first produced by the action of CH_3MgJ on

Card 1/2

Synthesis of 6-Alkyltetralines

S/020/60/131/02/035/071
B011/B005

6-tetralylheptylketone. 6-(6-tetralyl)-nonanol-6 (boiling point 162-163°) was first produced by the action of n-C_3H_7Br on 6-tetralyl-n-amylketone. Figures 1 and 2 show the IR spectra (recorded by Ye. D. Lubuzh) of the alcohols synthesized. The tertiary alcohols were reduced in the autoclave in the presence of copper chromite (at 120 atm and 240°). They may undergo partial dehydration under these conditions. Therefore, the hydrogenizate with nickel of Raney was additionally hydrogenized at 50° and 70 atm of hydrogen pressure. Table 2 indicates the properties of 6-(1-methyloctyl)-tetraline and 6-(1-n-propylhexyl)-tetraline produced for the first time. The authors produced normal 6-amyltetraline, 6-heptyltetraline, and 6-decyltetraline by reduction of corresponding ketones by means of the modified method (Ref 7), i.e. by decomposition of the hydrazones with sodium in diethylene-glycol medium. There are 2 figures, 2 tables, and 9 references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: December 17, 1959

Card 2/2

5(3) SOV/62-59-2-18/40

AUTHORS: Shuykin, N. I., Pozdnyak, N. A.

TITLE: Catalytic Alkylation of Benzene by Alkenes in the Vapor Phase (Kataliticheskoye alkilirovaniye benzola alkenami v parovoy faze). Communication 3. Alkylation of Benzene by Pentene-1 (Soobshcheniye 3. Alkilirovaniye benzola pentenom-1)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, Nr 2, pp 304-307 (USSR)

ABSTRACT: In the present paper benzene was alkylated with pentene-1 at 350° and a pressure of 40 atmospheres in contact with zinc chloride (30%) on aluminum oxide. Instead of the 2-phenyl pentane (I) and n-amyl benzene (II) expected, by means of the spectrum analysis 2-methyl-2-phenyl butane (III) and 3-methyl-4-phenyl butane (IV) or 2-methyl-3-phenyl butane (V) were found. The amyl benzenes mentioned can be formed on alkylation of benzene with 2-methyl butene-2 or with 2-methyl butene-1. These latter were obtained, under assumed conditions, by means of isomerization of pentene-1. In the fractions of the catalysts which have a boiling point above 210°, α- and β-methyl naphthalene was detected by means of Raman-spectra. The latter is

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Catalytic Alkylation of Benzene by Alkenes in the Vapor Phase. Communication 3. Alkylation of Benzene by Pentene-1

formed apparently in consequence of the dehydrocyclization of 3-methyl-4-phenyl butane. As to the formation of α-methyl naphthalene it might be assumed to be the isomerization product of β-methyl naphthalene. The authors expressed their gratitude to Yu. P. Yegorov for the recording of the Raman-spectra. There are 2 tables and 3 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: May 20, 1957

SOV/62-58-10-13/25

AUTHORS: Shuykin, N. I., Pozdnyak, R. A., Yegorov, Yu. P.

TITLE: Catalytic Alkylation of Benzene by Alkene in the Vapor Phase (Kataliticheskoye alkilirovaniye benzola alkenami v parovoy fase) Communication 2: Benzene Alkylation With 3-Methyl Butene-1 (Soobshcheniye 2. Alkilirovaniye benzola 3-metilbutenom-1)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1239 - 1244 (USSR)

ABSTRACT: The investigation of the reaction of the benzene alkylation by 3-methyl butene-1 is the continuation of the publications in this field of the benzene alkylation in contact with zinc chloride, applied to aluminum oxide (Refs 1-3). In the alkylation of benzene by 3-methyl butene-1 carried out the formation of 2 amyl benzenes, the 2-methyl-3-phenyl butane as well as small amounts of 2-methyl-4-phenyl butane may be expected. From the product of catalysis obtained amyl benzene (boiling point 189-189,5°; n_D^{20} 1,4929 and d_4^{20} 0,8736) was produced.

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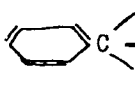
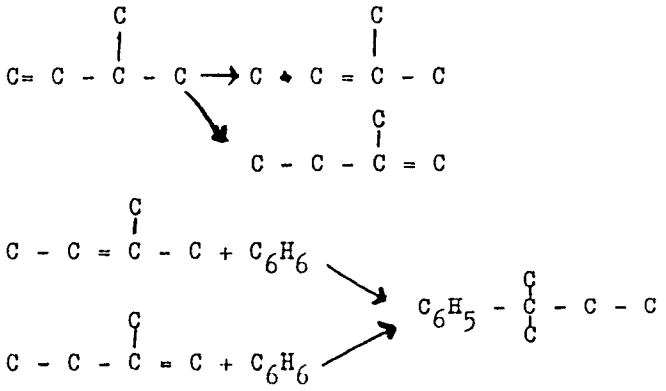
This substance was, however, neither similar to the 2-methyl-3-phenyl butane nor to 2-methyl-4-phenyl butane, but to the 2-methyl-2-phenyl butane. Its properties are: boiling point: 189-191°; n_D^{20} 1,492o and d_4^{20} 0,8737. To explain this problem the spectra of the combination dispersion were used. The result of the investigation (in which the spectrum obtained was compared with the spectrum of the compound



) was: The basic product of the benzene alkylation by 3-methyl butene-1 under the conditions assumed by the authors is:2-methyl-2-phenyl butane. This hydrocarbon can be formed in the alkylation of benzene by 2-methyl butene-1 and 2-methyl butene-2. Based on the experimental data obtained the authors proposed the following reaction scheme:

Catalytic Alkylation of Benzene by Alkene in the Vapor Phase. Communication 2: Benzene Alkylation With 3-Methyl Butene-1

SOV/62-58-10-13/25



There are 1 figure, 4 tables, and 7 references, 6 of which are Soviet.

Card 3/4

Catalytic Alkylation of Benzene by Alkene in the Vapor Phase. Communication 2: Benzene Alkylation With 3-Methyl Butene-1 SOV/62-58-10-13/25

ASSOCIATION: Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D. Zelinskiy AS USSR)

SUBMITTED: February 23, 1957

Card 4/4

Pazdnyak, N. A.

Distr: LEIj/LE3d

6
2

Catalytic alkylation of benzene with alkenes in vapor phase. I. Alkylation of benzene with propylene. N. I. Shuikin and N. A. Pazdnyak (N. D. Zelinskii Inst. Org. Chem., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 697–701; cf. *C.A.* 49, 13922*f*.—$ZnCl_2$ on Al_2O_3 is an effective catalyst for alkylation of C_6H_6 with C_3H_6. The best yield was obtained with 312 g. C_6H_6 and 15 l. C_3H_6 at 200°. The products contained mostly aromatic hydrocarbons from which iso-PrPh was isolated. Raman spectral analysis showed that higher boiling fractions contained *o*-, *m*-, and *p*-iso-$Pr_2C_6H_4$. $ZnCl_2$ on SiO_2 is less effective.

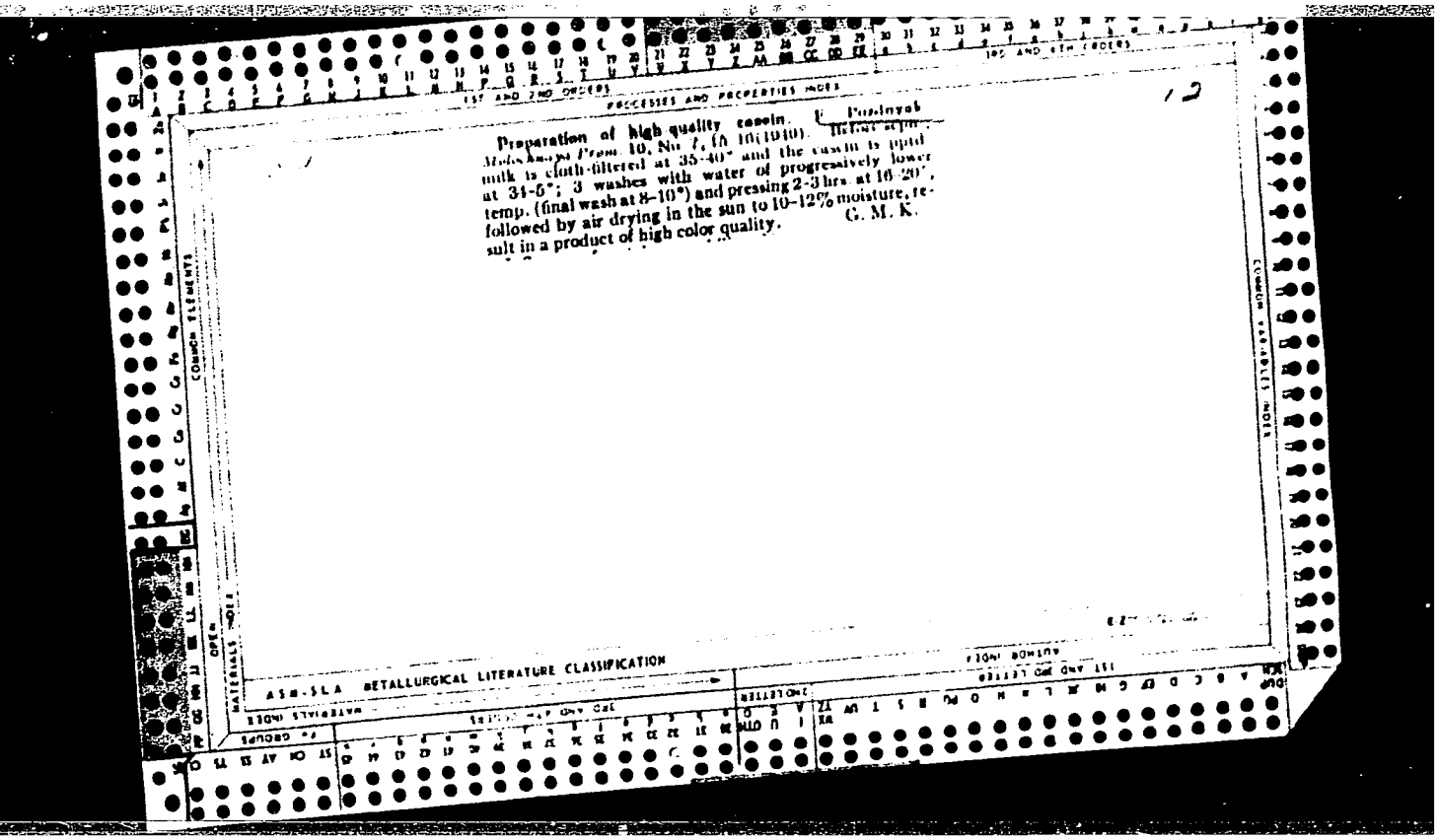
G. M. Kosolapoff

PM

CHERKASHIN, V.A., kandidat tekhnicheskikh nauk; AVERIN, N.D., laureat Stalinskoy premii [deceased]; POZDNYAK, V.P., inzhener, redaktor; UDOD, V.Ya., redaktor; VOLKOV, V.S., tekhnicheskiy redaktor.

[Winter mining of sand and clay in open pits] Razrabotka glinianykh i peschanykh kar'erov v zimnee vremia. Moskva, Gos.izd-vo lit-ry po stroit. i arkhitekture, 1955.87p [Microfilm](MLRA 9:6)

1.Nachal'nik laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta organizatsii i mekhanizatsii stroitel'stva (for Averin). 2.Vsesoyusnyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii stroitel'stva.
(Clay) (Sand)



CA

Destructive catalytic oxidation of xylene. N. I. Shulkin and N. A. Pozdnyak. *Vestnik Moskov. Univ.* 6, No. 2, *Ser. Fiz.-Mat. i Estestven. Nauk* No. 1, 85-8(1951).—PhMe passed through a tube with Cu-chromite catalyst or Cr-Vd catalyst at 350-550° with dry air gave C_6H_6, BzH, and small amts. of BzOH. Xylene, b_{760} 136-40°, treated similarly gave up to 10% MePh with Cr-Vd catalyst at 650°. The other products secured with the above catalyst, as well as with Cu-chromite, Cr-Ag, and Cr-Mn, included toluic acids, tolualdehydes, BzH, and BzOH. The highest amt. of the oxidation products was found with Cr-Vd catalyst at 350° and 0.06 ml./min. flow rate when 130% (of theoretical) O (as air) was used; at 650° with a deficiency of air some C_6H_6 was also detected. Hence destructive oxidation of xylene proceeds through successive formation of PhMe and C_6H_6 and the resp. aldehydes and acids. G. M. K.

POZDNYAK, N.A.

4

U S S R .

Contact catalytic alkylation of benzene by acetals. II. Ethylation of benzene by ethylal (diethyl formal), diethyl acetal, and diethyl ether. N. I. Shuikin and N. A. Pozdnyak (Moscow State Univ.). *Shornik Statei Obshchei Khim.* 2, 1014–10(1953).—Refluxing 40% formalin with 1.5 parts EtOH contg. 2% HCl 30 min. in the presence of $CaCl_2$ (to bind all the H_2O in the formalin), cooling, and treating the upper layer with $CaCl_2$ 20–30 min. with shaking, gave 67% $CH_2(OEt)_2$, b_{760} 87.5°, n_D^{20} 1.3749, which, passed over aluminosilicate catalyst at 150–500°, yielded mainly unsatd. hydrocarbons (C_2H_4), along with Et_2O (formed up to 200°), EtOH, H_2O, HCO_2Et, and unchanged starting material. Similar treatment of $MeCH(OEt)_2$ gave C_2H_4, Et_2O (up to 200°), EtOH, and EtOAc, along with an unknown solid, m. 115°. Passage of C_2H_4 with $CH_2(OEt)_2$ over the catalyst at 300–500° gave a range of products; at 500° at space velocity of the charge of 0.15 were obtained 4.9% MePh, 2.4% EtPh, and 3.5% xylenes. Similar reaction with $MeCH(OEt)_2$ or Et_2O gave 6% and 13.8% resp. EtPh.

G. M. Kosolapoff

5 (3,4)

AUTHORS: Shuykin, N. I., Pozdnyak, N. A. SOV/62-59-6-21/36

TITLE: Catalytic Transformations of Pentene-1 and 3-Methylbutene-1 (Kataliticheskiye prevrashcheniya pentena-1 i 3-metilbutena-1)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 1088 - 1090 (USSR)

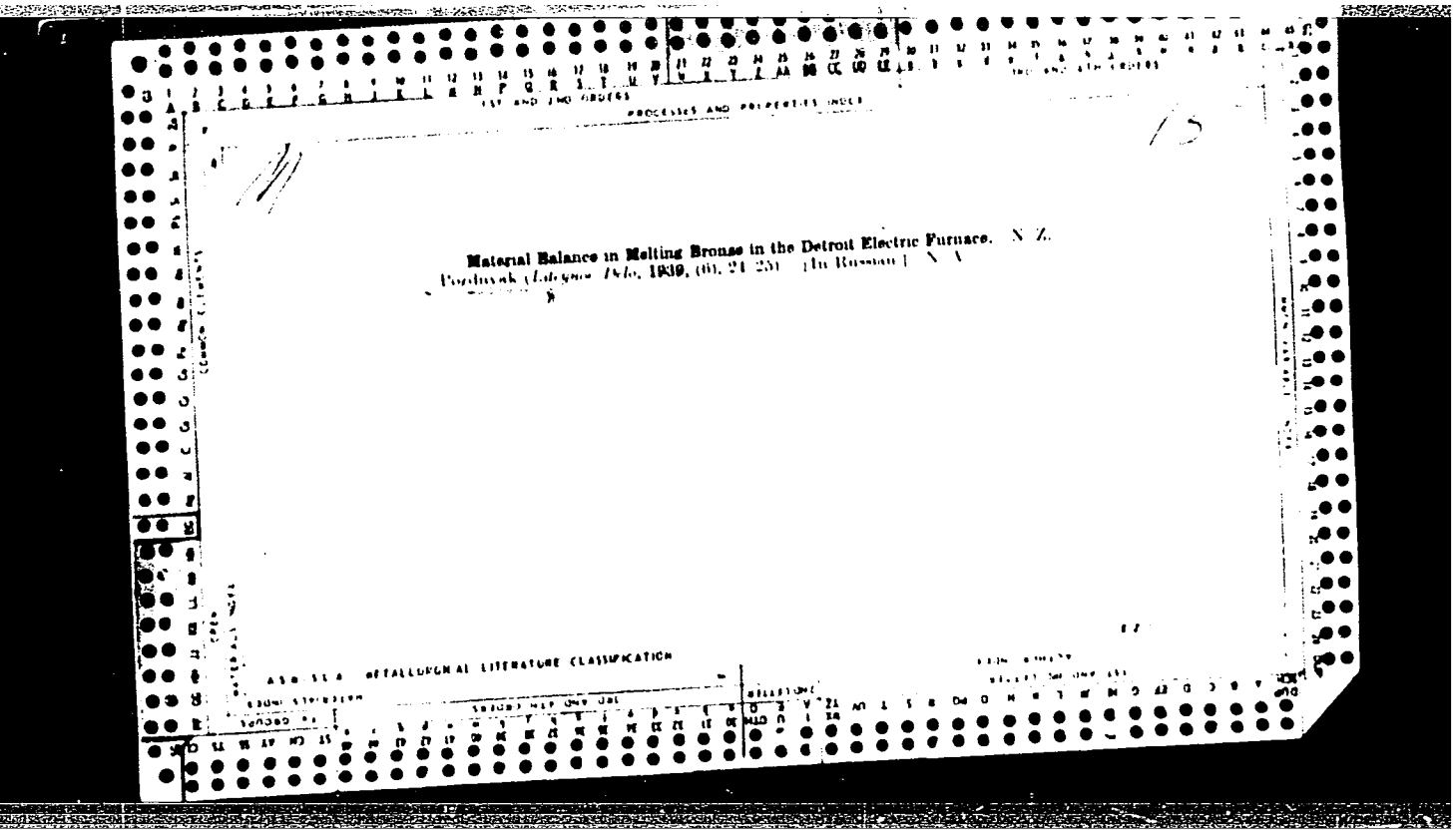
ABSTRACT: As is well known from publications (Refs 1-10,11,12, the latter two are previous papers by the authors) the isomeric transformation (ramification, transposition of the double bonds) by the influence of different catalysts takes place in a different way and to a different degree. In this connection the present investigation dealt with the catalytic transformation of the substances mentioned in the title with zinc chloride on saturated aluminum oxide at a pressure of 40 atmospheres and a temperature of 350°. The investigations were carried out in a continuously working apparatus. They showed that with the given conditions the compounds mentioned readily isomerize to 2-methylbutene-1 and 2-methylbutene-2. The isopentanes were hydrated by transposition of the hydrogen, and transformed into methylbutene. Part of the pentenes is also polymerized under formation of dimers. In the experimental part the catalytic transformation

Card 1/2

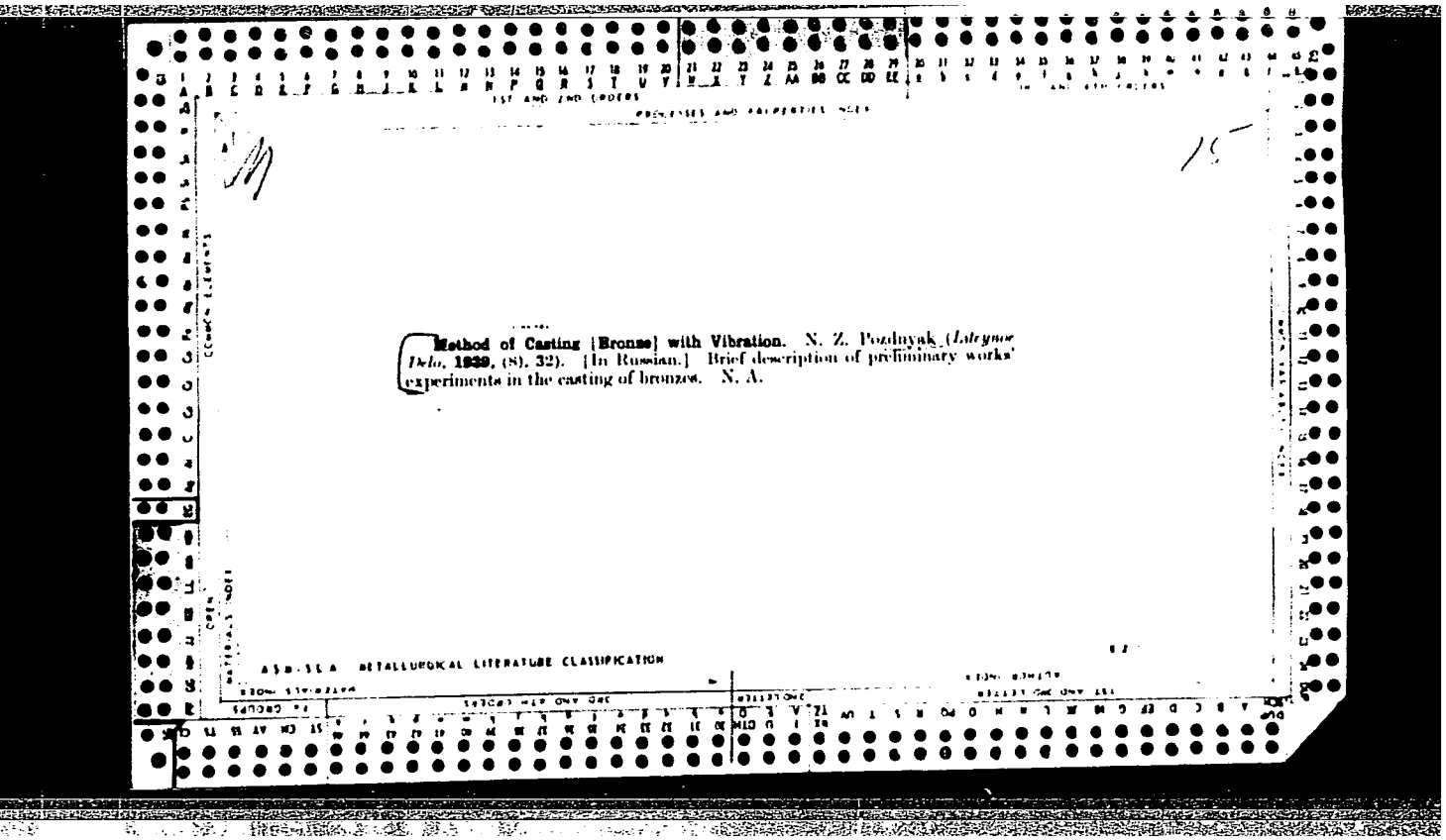
of both substances is described in detail. The two tables give the results of the distillation of the catalysates (I,II) of both substances. The catalysate (I) contained 31.5% 2-methylbutene, 6.8% 3-methylbutene-1, 17.5% 2-methylbutene-2, and 6.7% 2-methylbutene-1. The other products were polymerization products. The catalysate (II) contained 2-methylbutene 32%, isopentene 40.8%, and polymerization products 27.2%. There are 1 table and 14 references, 7 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: September 27, 1957



Material Balance in Melting Bronze in the Detroit Electric Furnace. N. Z.
Tsvetnyi Metallurgiya, No. 1939, (6), 24-25 (In Russian)



Method of Casting [Bronze] with Vibration. N. Z. Pozdnyak (*Liteynoe Delo*, **1939**, (8), 32). [In Russian.] Brief description of preliminary works' experiments in the casting of bronzes. N. A.

POZDNYAK, N.Z., kand.tekhn.nauk

Sixth All-Union Scientific technological Conference on Powder Metallurgy. Vest.mashinostr. 43 no.3:85-86 Mr '63. (MIRA 16:3)
(Powder metallurgy)

MIKRYUKOV, V.Ye.; POZDNYAK, N.Z.

Investigation of heat conductivity, electrical resistance, and mechanical properties of ceramic metal, iron-copper alloys. Porosh.met. 1 no.6:79-84 N-D '61. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet i Vsesoyuznyy zaochnyy politekhnicheskiy institut.
(Ceramic metals--Testing)

POZDNYAK, N. Z.

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Metallurgical Abstracts
July 1954
Foundry Practice and
Appliances

Reverberatory Furnace of Improved Construction for Melting Bronzes and Brasses. N. Z. Pozdnyak (*Liteinoe Proizvodstvo*, 1953, (6), 13–15).—[In Russian]. A new type of a double reverberatory oil-fired furnace is described. The two identical furnaces operate in turn, the hot gases from one unit passing through the other and pre-heating the fresh charge in it. In this way, economy of fuel and reduction of metal losses is achieved. Construction of the furnace is explained with the aid of drawings, giving the main dimensions. Main features of the furnace are: melting time for a charge of 500 kg. of Sn-bronze 40–50 min., loss of metal 3%, oil consumption 9 wt.-% of the charge, and the temp. of metal before tapping 1250° C. The furnace melted 400 charges before a general overhaul was necessary.—S. K. L.

MIKRYUKOV, V.Ye.; POZDNYAK, N.Z.

Study of physicochemical properties of materials with an iron base, obtained by the method of powder metallurgy. Vest.Mosk.un. 8 no.2:53-68 F '53. (MLRA 6:5)

1. Laboratoriya molekulyarnykh i teplovykh yavleniy.
(Powder metallurgy) (Iron-carbon alloys)

Pozdnyak, N. Z.

5

Investigation of the physical and mechanical properties of ferrous materials prepared by the method of powder metallurgy. II

[illegible]

[illegible] and varying C contents were prepd. by sintering Fe powder at 1150° in an atm. of H and tested to det. the effect of C [illegible] Brinell hardness

[illegible] was determined both at the periphery and at the center. The Brinell hardness was found to [illegible] with C content and had a max. at 0.8% C, the eutectic composition, and a max. at 1.02% C. The yield strength naturally increased linearly with increasing C content and reached a max. at the eutectic composition [illegible] C content [illegible] and 1.02%. This phenomenon is not observed in cast steels.

Mary Antonides

FD-1504

USSR/Physics - Properties of antifriction alloys

Card 1/1 : Pub. 129-7/18

Author : Mikryukov, V. Ye and Pozdnyak, I. N.

Title : Study of temperature dependence, thermal and electric conductivity of ferrocuorous-graphite porous antifriction alloys. Part II

Periodical : Vest. Mosk. un., Ser Fizikomat. i yest. nauk, 9, No 6, 51-58, Sep 54

Abstract : Continuation of previous works by authors (ibid. 3 (1949); 6 (1951); 2 (1953); 9 (1953); Uchenyye Zapiski 74 (1954); presenting tabulated results of thermal and electric conductivities of porous metallo-ceramic carbon-steel alloys in relation to their copper content up to 40%. Above mentioned references included.

Institution : Chair of Thermal and Molecular Phenomena, Moscow University

Submitted : March 3, 1954

FD-1142

USSR/Physics - Friction

Card 1/1 Pub. 129-6/23

Author : Mikryukov, V. Ye., and Pozdnyak, N. Z.

Title : Investigation of the mechanical properties of ferrocuprographite porous antifriction alloys. Part IV

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 7, 49-57, Oct 1954

Abstract : In this work the authors continue their investigations on the physico-mechanical properties of porous metalloceramic alloys. In part I they expounded the results of studies on heat conductivity, electrical conduction, limit strength under tension and compression for various porosities with carbon content constant; part II, same as in I but for various carbon contents with porosity constant; part III, for variable copper content with constant porosity and carbon content. In this part, IV, the authors present the results of investigations on the mechanical properties of porous metalloceramic alloys in dependence upon their content of copper (up to 40%) for constant porosity and carbon content. The data of part IV was given at the Second All-Union Scientific Technical Session on Powder Metallurgy, held 20 September 1953 in Kiev.

Institution : Chair of Molecular Physics and Theory of Heat

Submitted : March 4, 1954

MIKRYUKOV, V.Ye.; POZDNYAK, N.Z.

Study of the temperature dependence of heat and electric conductivity of iron-copper-graphite porous antifriction alloys. Vest.Mosk.un. 9 no.9:51-59 S '54. (MLRA 8:1)

1. Kafedra molekulyarnykh i teplovykh yavleniy.
(Iron-copper-alloys--Electric propetries) (Friction)

POZDNYAK, N. Z.

62. Mechanical properties of porous iron-copper-graphite antifriction alloys. IV. V. E. Mikryukov and N. Z. Pozdnyak. *Vestnik Moskov. Univ.* 9, No. 10, *Ser. Fiz.-Mat. i Estestven. Nauk* No. 7, 49–57(1954); cf. *C.A.* 49, 6805*h*.—Brinell hardness and tensile strength of Fe-Cu-C alloys though higher than those of alloys without Cu decrease linearly as the Cu content increases (up to 40% Cu). The crushing strength increases exponentially with the Cu content whereas the impact strength remains const. Sintering *in vacuo* results in decarbonization ascribed to the reduction of Fe oxides. I. Bencowitz (1)

POZDNYAK, N.Z.

5662* Investigation of the Mechanical Properties of Iron-Copper-Graphite Porous Antifriction Alloys. **Issledovanie mekhanicheskikh svoistv zhelezo-medno-grafitovykh poristykh antifriktsionnykh splavov.** (Russian.) V. E. Mikriukov and N. Z. Pozdniak. *Moskovskogo Universiteta. Vestnik, Serila Fiziko-Matematicheskikh i Estestvennykh Nauk*, v. 9, no. 10, Oct. 1954, p. 49-57.

Strength, and hardness tests in relation to proportion of components, porosity and methods of producing the alloys. Tables, graphs, micrographs. 9 ref.

AID P - 4290

Subject : USSR/Engineering

Card 1/1 Pub. 128 - 15/25

Authors : Mikryukov, V. Ye., Kand. Phys. and Math. Sci., and N. Z. Pozdnyak, Eng.

Title : Iron-copper-graphite porous antifriction alloys

Periodical : Vest. mash., #2, p. 52-56, F 1956

Abstract : Porous antifriction alloys of iron, copper and graphite obtained in different percentages by the method of powder metallurgy have been tested and the results are given. Photos, tables, charts. 4 references 1951-1954.

Institution : None

Submitted : No date

POZDNYAK, N. Z., Can Tech Sci -- (diss) "Study of Physico-Mechanical Properties of Porous Ferro-Graphite Alloys." Mos, 1958. 16 pp (Inst Metallurgy im A. A. Naykov USSR). 150 copies (KL 40-58, 114)

POZDNYAK, N. Z. Cand Tech Sci -- (diss) "Study of physicomechanical properties of porous ferrographite alloys." Mos, 1957. 11 pp 20 cm. (All-Union Correspondence Polytechnic Inst), 100 copies

(KL, 7-57, 107)

PHASE I BOOK EXPLOITATION SOV/5010

Pozdnyak, Nikita Zakharovich

Metallokeramicheskiye splavy; lektsiya po kursu "Poroshkovaya metallurgiya" dlya studentov metallurgicheskogo, mashinostroitel'nogo i avtomekhanicheskogo fakul'tetov (Powdered-Metal Alloys; Lecture in the Course "Powder Metallurgy," for Students in Metallurgy, Machine-Building, and Automotive-Engineering Departments) Moscow, 1959. 22 p. 1,000 copies printed.

Sponsoring Agency: Vsesoyuznyy zaochnyy politekhnicheskiy institut. Kafedra "Metallovedeniye i termicheskaya obrabotka metallov".
Resp. Ed.: K. M. Pogodina, Docent, Candidate of Technical Sciences; Ed. of Publishing House: I. I. Baik; Tech. Ed.: R. I. Sagitullina.

PURPOSE: This booklet is intended for students in metallurgical, machine-building, and automotive-engineering departments.

COVERAGE: The booklet contains information on metal powders of various compositions. Objects and machine parts manufactured

Card 1/2

from prealloyed powders are discussed and data on the types of metal powder used are provided. The production of metal powder is described briefly. Attention is also given to the composition, properties, and structure of certain alloys. No personalities are mentioned. There are 15 references, all Soviet.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress (TA490.P66)

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61232

AUTHORS: Nikryukov, V.Ye., and Pozdnyak, N.Z. SOV/55-59-1-7/20

TITLE: *Investigation of the Physical-Mechanical Properties of* Iron-Copper-Graphite Alloys With Small Additions of Copper. Part V

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 1, pp 51-60 (USSR)

ABSTRACT: *For several iron-graphite alloys with 2% addition of Cu the authors determined tensile and compression strength, hardness,* notched-bar toughness, linear coefficients of expansion, heat conduction, etc. for different temperatures. The results were compared with the data for the same alloys without the addition of copper. It was stated that small additions of copper improve essentially the mechanic properties; the coefficient of thermal conductivity becomes smaller, the resistivity becomes greater. The linear coefficient of expansion depends little on the porosity and is little different from the coefficient of expansion for compact casted steel.- The authors mention I.Yu.Bal'shin, N.G. Korolenko, and P.I.Bebnev.

There are 6 tables, 6 figures, and 11 references, 9 of which are Soviet, and 2 American.

ASSOCIATION: Kafedra molekulyarnoy fiziki (Chair of Molecular Physics)

SUBMITTED: April 30, 1958

Card 1/1

ORLOV, Nikolay Dmitriyevich, kand.tekhn.nauk; MIRONOV, Vladimir Mikhaylovich; SPASSKIY, A.G., doktor tekhn.nauk, retsenzent; KURDYUMOV, A.V., kand.tekhn.nauk, retsenzent; PIKUNOV, M.V., kand.tekhn.nauk, retsenzent; CHURSIN, V.M., kand.tekhn.nauk, retsenzent; POZDNYAK, N.Z., inzh., retsenzent; ZASLAVSKIY, D.M., inzh., retsenzent; RUBTSOV, N.N., prof., doktor tekhn.nauk, red.; POMERANTSEV, S.N., inzh., red.; RYBAKOVA, V.I., inzh., red.izd-va; MODEL', B.I., tekhn.red.

[Founding handbook; shaped castings of heavy nonferrous metals] Spravochnik liteishchika; fasonnoe lit'e iz splavov tiazhelykh tsvetnykh metallov. Pod red. N.N.Rubtsova. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 402 p.
(MIRA 13:11)

(Nonferrous metals--Founding)
(Founding--Handbooks, manuals, etc.)

S/129/60/000/011/016/016
E073/E535

AUTHOR: Pozdnyak, N. Z., Candidate of Technical Sciences

TITLE: Review of the book "Thermal Conductivity and Electric Conductivity of Metals and Alloys" by V. Ye. Mikryukov, Metallurgizdat, 1959

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No.11, pp.64-65

TEXT: In the first chapter of the book the classical electron theory of Drude-Lorentz, the theory of Sommerfeld and Bloch, the zonal theory of a solid body and the multi-electron theory, which is at present being developed by Soviet scientists, are presented. The author shows that the zonal theory is based on assuming that it is possible to reduce the multi-electron problem to the single electron problem and that the field in which the non-interacting electrons move has a periodic character and reflects the periodic structure of the crystal lattice. However, a number of problems cannot be solved by the single electron theory. The limits of application of the zonal theory are shown and the tasks of further investigations relating to the solid body theory are outlined. The second chapter contains an analysis of all non-steady state

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S/129/60/000/011/016/016
E073/E535

Review of the book "Thermal Conductivity and Electric Conductivity of Metals and Alloys" by V. Ye. Mikryukov, Metallurgizdat, 1959

methods of measuring the thermal and electric conductivity in metals and alloys which are based on the very complicated Forbes method and also steady state methods which are based on temperature waves. Apparatus and methods developed at Moscow University by the author are described. In his review of experimental methods, work published up to and including 1955 is dealt with. The third chapter deals with experimental data of the author on studying the electric conductivity of alloys which have been least investigated. He confirms that the electric resistance in metals occurs on disturbing the periodicity of the crystal lattice, due to thermal oscillations of the atoms. Increase in the electric resistance of solid solutions is attributed to the scattering of electron waves owing to the non-uniformity of the electric field caused by thermal oscillations of the crystal lattice and scattering of the electron waves, due to the presence of atoms of the dissolved substance. This is proved by data on the electric properties of alloys of the systems Cu-Be-Ni; Cu-Cr-Zr; Cu-Be-Co; Cu-Be-Mn; Cu-Be; Bi-Pb; Bi-Cd; Bi-Co and other copper-base alloys. Of greatest value are the data

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